

AUTOMATICALLY IDENTIFYING SUBNETWORKS IN A NETWORK

ABSTRACT

A software facility for automatically identifying subnetworks in a network is described. The facility receives a plurality of addresses of hosts in the network, and accesses a binary tree. The nodes of the binary tree each represent a range of addresses within the network. A facility traverses the binary tree to identify candidate nodes where both child nodes have one or more descendent leaf nodes representing host addresses. The facility tests the address range represented by each candidate node visited in the traversal to determine whether the address range is a subnet address range for a subnet being used on the network. If testing indicates that a visited candidate node represents such an address range, the facility identifies the visited candidate node as a subnet node. The facility skips, in the traversal, any candidate nodes that are descendents of an identified subnet node.